

Title (en)  
DENSE PHASE POWDER PUMP AND CORRESPONDING OPERATING PROCESS

Title (de)  
PULVERDICHTSTROMPUMPE UND ENTSPRECHENDES BETRIEBSVERFAHREN

Title (fr)  
POMPE DE TRANSPORT DE POUDRE EN PHASE DENSE ET PROCEDE DE FONCTIONNEMENT CORRESPONDANT

Publication  
**EP 2981365 A1 20160210 (DE)**

Application  
**EP 14711243 A 20140318**

Priority  
• DE 102013205895 A 20130403  
• DE 102013211536 A 20130619  
• EP 2014055446 W 20140318

Abstract (en)  
[origin: WO2014161717A1] The invention relates to a powder conveyor (100) having a pneumatically actuated dense phase powder pump (1) and a pressure controller (91). The dense phase powder pump (1) comprises at least one conveyor chamber (4) having a powder inlet valve (7) and a powder outlet valve (8). The pressure controller (91) can be used to adjust and maintain a set pressure on the at least one conveyor chamber (4) of the dense phase powder pump (1) that is or can be previously defined and/or to adjust and maintain an actuation pressure on the powder inlet valve (7) or the powder outlet valve (8) that is or can be previously defined. According to the invention, the powder conveyor further comprises a gas flow detection device (D1, D2, D3, D4) for detecting or determining a quantity of gas that is fed or removed per time unit when the set pressure is adjusted and maintained on the at least one conveyor chamber (4) or a quantity of gas that is fed to the powder inlet valve (7) or the powder outlet valve (8) per time unit when the actuation pressure is adjusted and maintained. An evaluation device (92) compares at least one detected or determined gas flow value with a corresponding set value and automatically generates an error and/or alarm signal when a deviation is detected.

IPC 8 full level  
**B05B 7/14** (2006.01); **B65G 53/28** (2006.01); **F04F 1/02** (2006.01)

CPC (source: EP US)  
**B05B 7/1404** (2013.01 - US); **B05B 7/1459** (2013.01 - EP US); **B05B 7/1463** (2013.01 - US); **B05C 19/00** (2013.01 - US); **B05C 19/06** (2013.01 - US); **B65G 53/18** (2013.01 - US); **B65G 53/30** (2013.01 - US); **B65G 53/58** (2013.01 - US); **B65G 53/60** (2013.01 - US); **B65G 53/66** (2013.01 - US); **F04F 1/02** (2013.01 - EP US)

Citation (search report)  
See references of WO 2014161718A1

Cited by  
WO2018153515A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2014161717 A1 20141009**; BR 112015024418 A2 20170718; BR 112015024418 B1 20210223; BR 112015024418 B8 20210323; BR 112015025287 A2 20170718; BR 112015025287 B1 20210105; CN 105121027 A 20151202; CN 105121027 B 20180403; CN 105142799 A 20151209; CN 105142799 B 20171205; EP 2981364 A1 20160210; EP 2981364 B1 20180530; EP 2981365 A1 20160210; EP 2981365 B1 20180509; TW 201446338 A 20141216; TW 201501810 A 20150116; US 10112787 B2 20181030; US 10604360 B2 20200331; US 2016052000 A1 20160225; US 2016122138 A1 20160505; US 2019023505 A1 20190124; US 9745148 B2 20170829; WO 2014161718 A1 20141009

DOCDB simple family (application)  
**EP 2014055442 W 20140318**; BR 112015024418 A 20140318; BR 112015025287 A 20140318; CN 201480019566 A 20140318; CN 201480020210 A 20140318; EP 14711242 A 20140318; EP 14711243 A 20140318; EP 2014055446 W 20140318; TW 103111228 A 20140326; TW 103111230 A 20140326; US 201414782298 A 20140318; US 201414782316 A 20140318; US 201816140275 A 20180924